

CLAIMS

1. A process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a trichlorosilane, and an aromatic hydrocarbon coupling solvent; wherein the mole ratio of the ether solvent to the phenyl Grignard reagent is 2 to 5, the mole ratio of the trichlorosilane to the phenyl Grignard reagent is 0.1 to 10, and the mole ratio of the aromatic coupling solvent to the phenyl Grignard reagent is 3 to 7.
2. The process according to Claim 1 wherein the phenyl Grignard reagent is phenyl magnesium chloride.
3. The process according to Claim 1 or 2 wherein the ether solvent is a dialkyl ether selected from the group consisting of dimethyl ether, diethyl ether, ethylmethyl ether, n-butylmethyl ether, n-butylethyl ether, di-n-butyl ether, di-isobutyl ether, isobutylmethyl ether, and isobutylethyl ether.
4. The process according to any of Claims 1 to 3 wherein the aromatic solvent is toluene.
5. The process according to any of Claims 1 to 4 wherein the trichlorosilane is selected from the group consisting of methyltrichlorosilane, phenyltrichlorosilane, and vinyltrichlorosilane.
6. A process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a phenylchlorosilane, and an aromatic hydrocarbon coupling solvent; wherein the mole ratio of the ether solvent to the phenyl Grignard reagent is 2 to 5, the mole ratio of the phenylchlorosilane to the phenyl Grignard reagent is 0.5 to 5, and the mole ratio of the aromatic coupling solvent to the phenyl Grignard reagent is 3 to 7.
7. The process according to Claim 6 wherein the phenyl Grignard reagent is phenyl magnesium chloride.

8. The process according to Claim 6 or 7 wherein the ether solvent is a dialkyl ether selected from the group consisting of dimethyl ether, diethyl ether, ethylmethyl ether, n-butylmethyl ether, n-butylethyl ether, di-n-butyl ether, di-isobutyl ether, isobutylmethyl ether, and isobutylethyl ether.

9. The process according to any of Claims 6 to 8 wherein the aromatic solvent is toluene.

10. The process according to any of Claims 6 to 9 wherein the phenylchlorosilane is selected from the group consisting of phenylmethyldichlorosilane, phenyltrichlorosilane, diphenyldichlorosilane, phenylvinylchlorosilane, and hydridophenyldichlorosilane.

11. A process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a trichlorosilane, a phenylchlorosilane, and an aromatic hydrocarbon coupling solvent; wherein the mole ratio of the ether solvent to the phenyl Grignard reagent is 2 to 5, the mole ratio of the trichlorosilane to the phenyl Grignard reagent is 0.1 to 10, the mole ratio of the phenylchlorosilane to the phenyl Grignard reagent is 0.5 to 5, and the mole ratio of the aromatic coupling solvent to the phenyl Grignard reagent is 3 to 7.

12. The process according to Claim 11 wherein the phenyl Grignard reagent is phenyl magnesium chloride.

13. The process according to Claim 11 or 12 wherein the ether solvent is a dialkyl ether selected from the group consisting of dimethyl ether, diethyl ether, ethylmethyl ether, n-butylmethyl ether, n-butylethyl ether, di-n-butyl ether, di-isobutyl ether, isobutylmethyl ether, and isobutylethyl ether.

14. The process according to any of Claims 11 to 13 wherein the aromatic solvent is toluene.

15. The process according to any of Claims 11 to 14 wherein the trichlorosilane is selected from the group consisting of methyltrichlorosilane, phenyltrichlorosilane, and vinyltrichlorosilane.

16. The process according to any of Claims 11 to 15 wherein the phenylchlorosilane is selected from the group consisting of phenylmethyldichlorosilane, phenyltrichlorosilane, diphenyldichlorosilane, phenylvinylchlorosilane, and hydridophenyldichlorosilane.